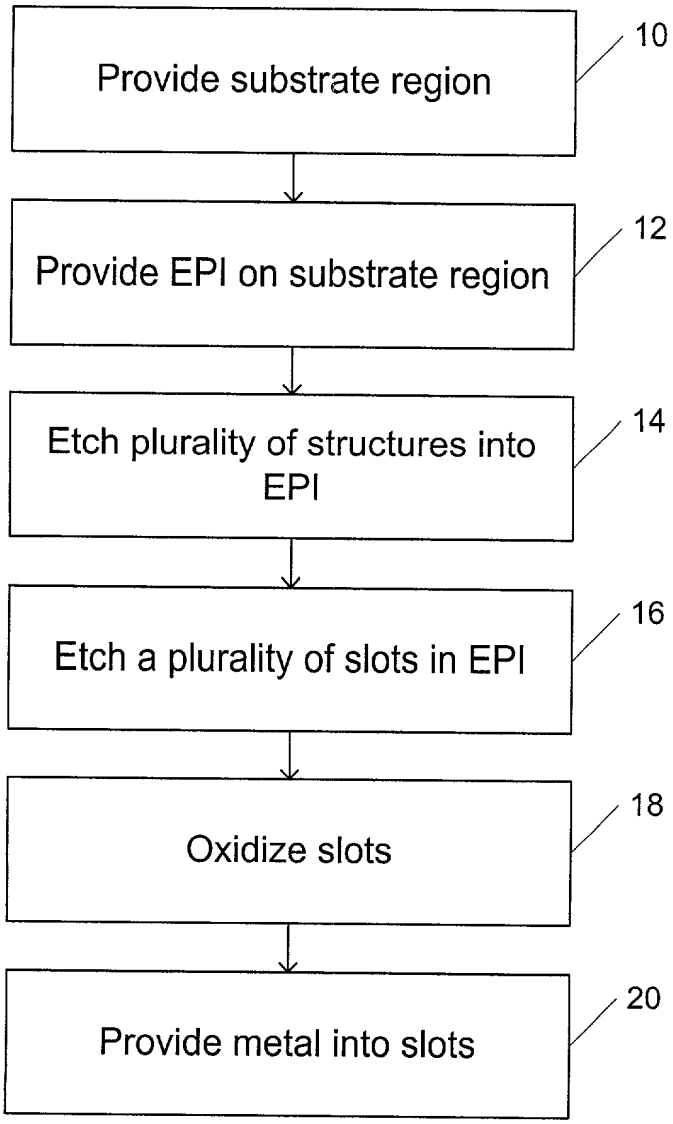

Provide substrate region
10
Provide EPI on substrate region
12
Etch plurality of structures into EPI
14
Etch a plurality of slots in EPI
16
Oxidize slots
18
Provide metal into slots
20

Fig. 1

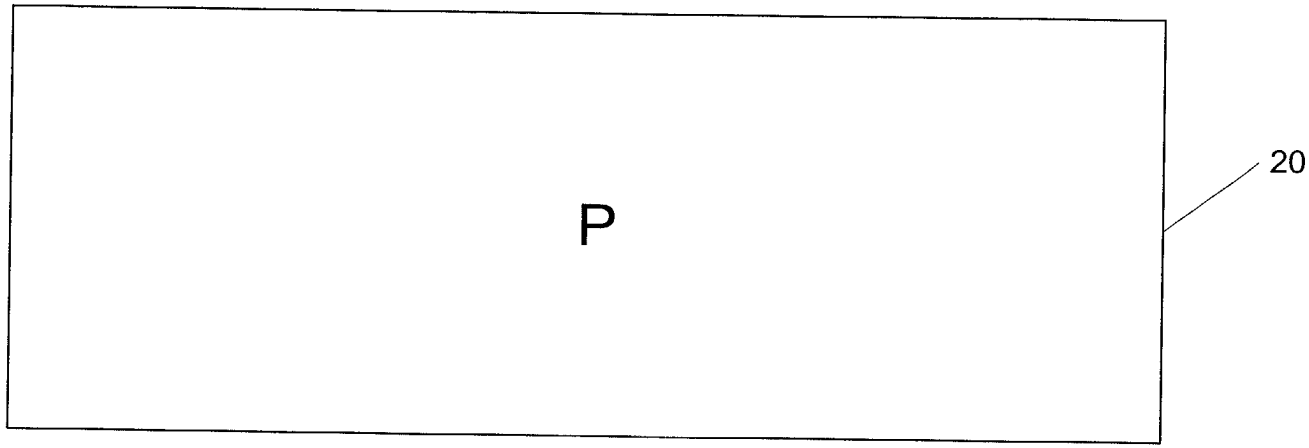


Fig. 2a

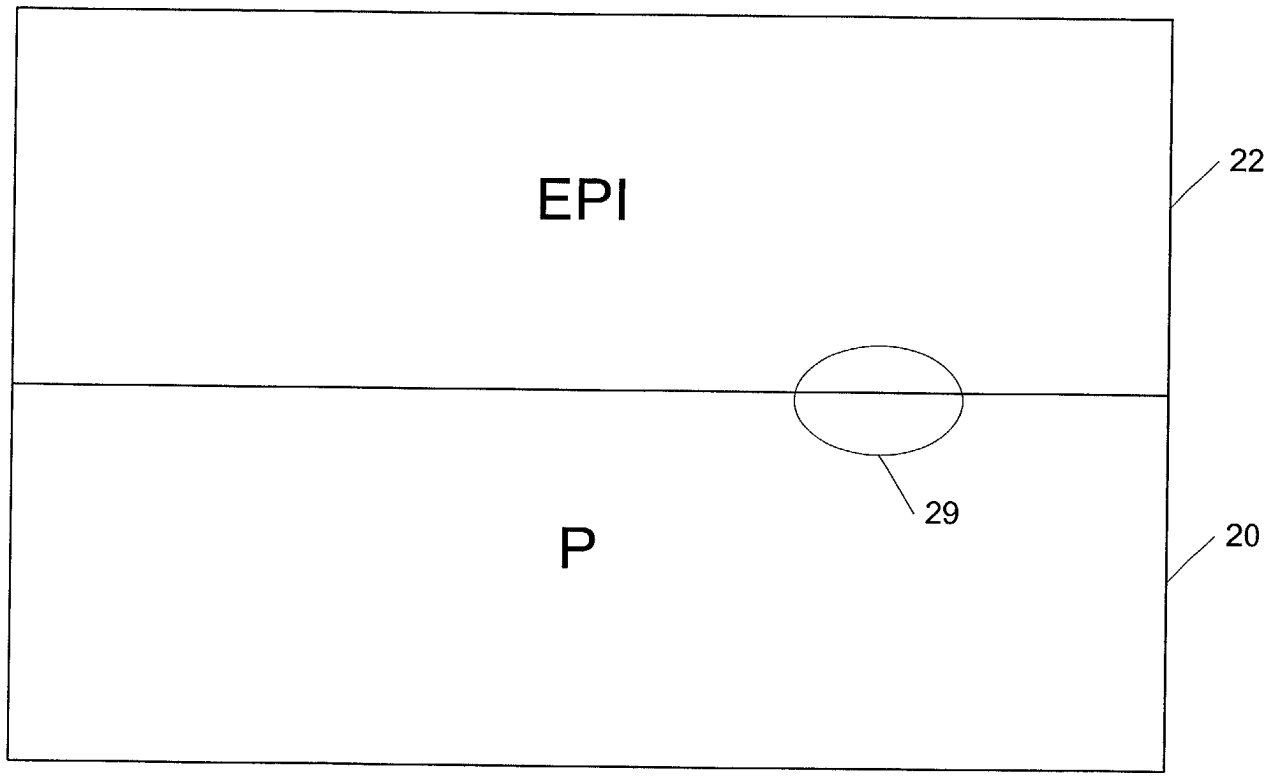


Fig. 2b

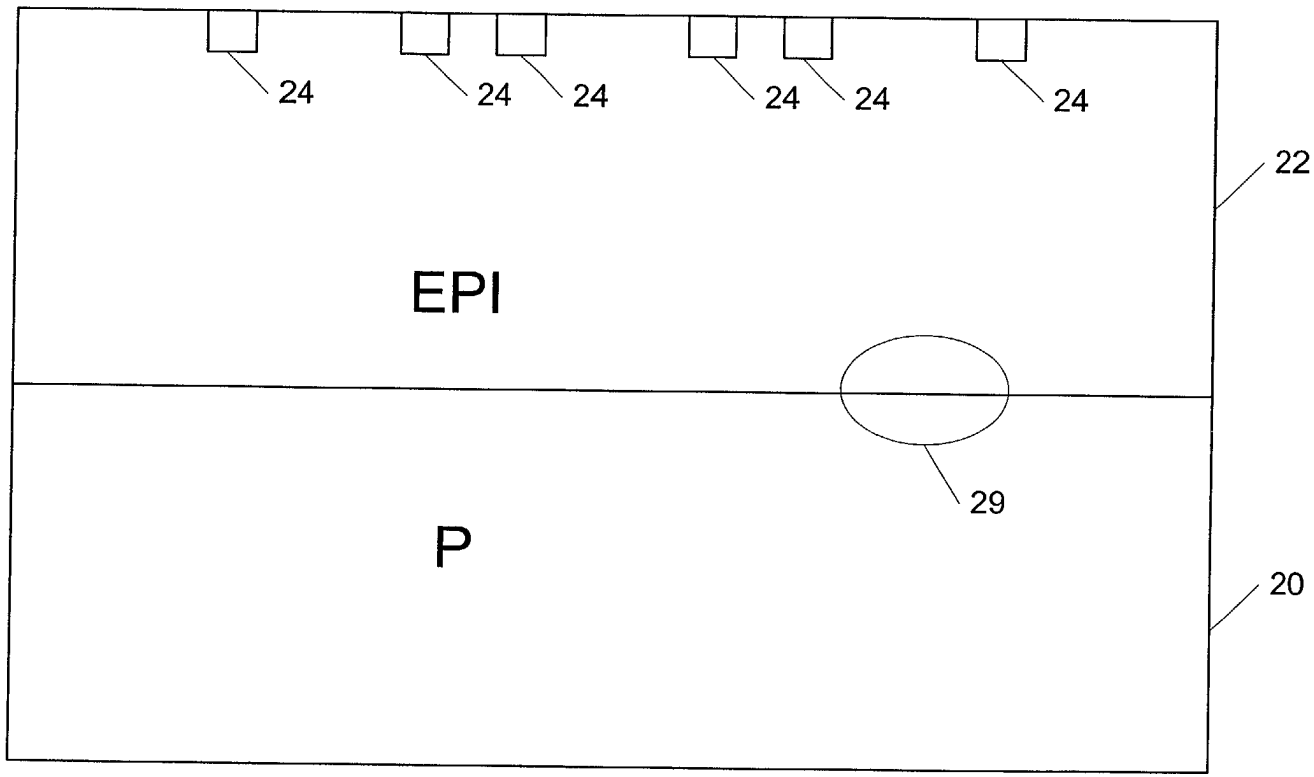


Fig. 2c

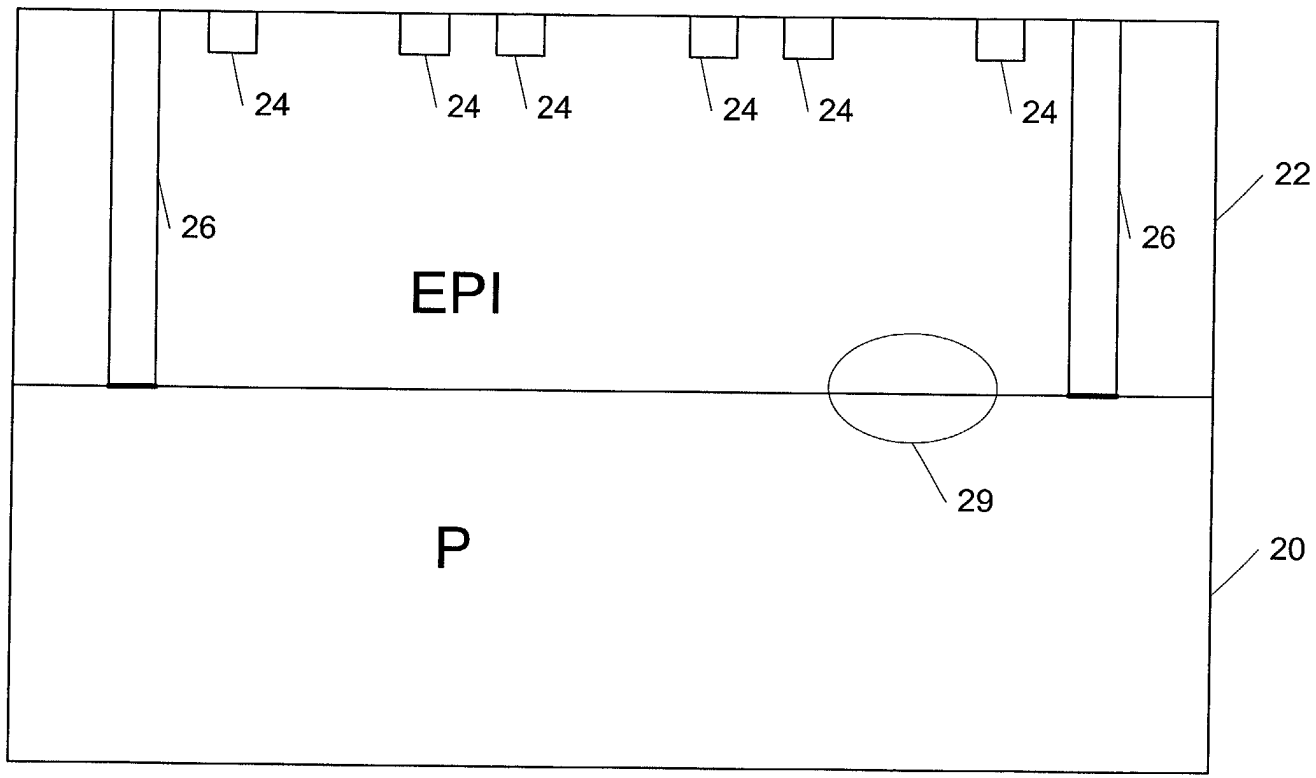


Fig. 2d

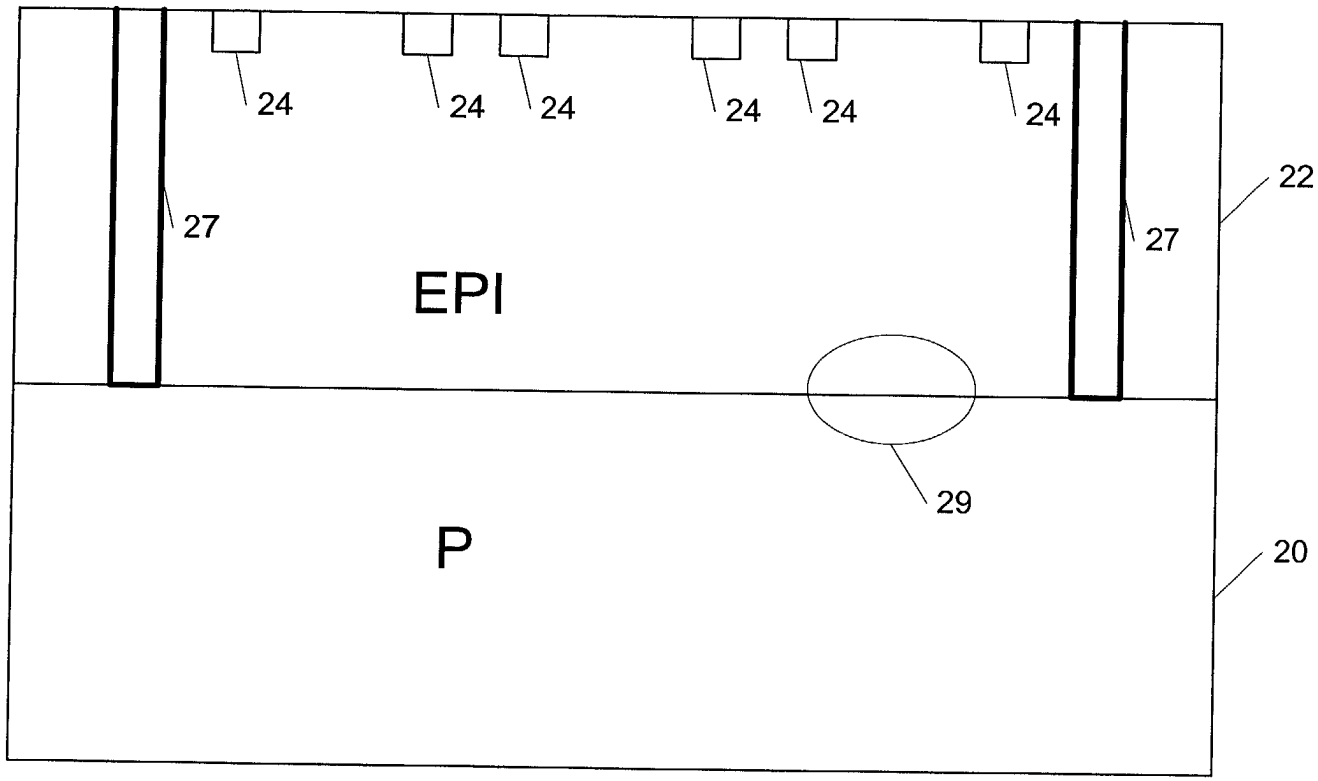


Fig. 2e

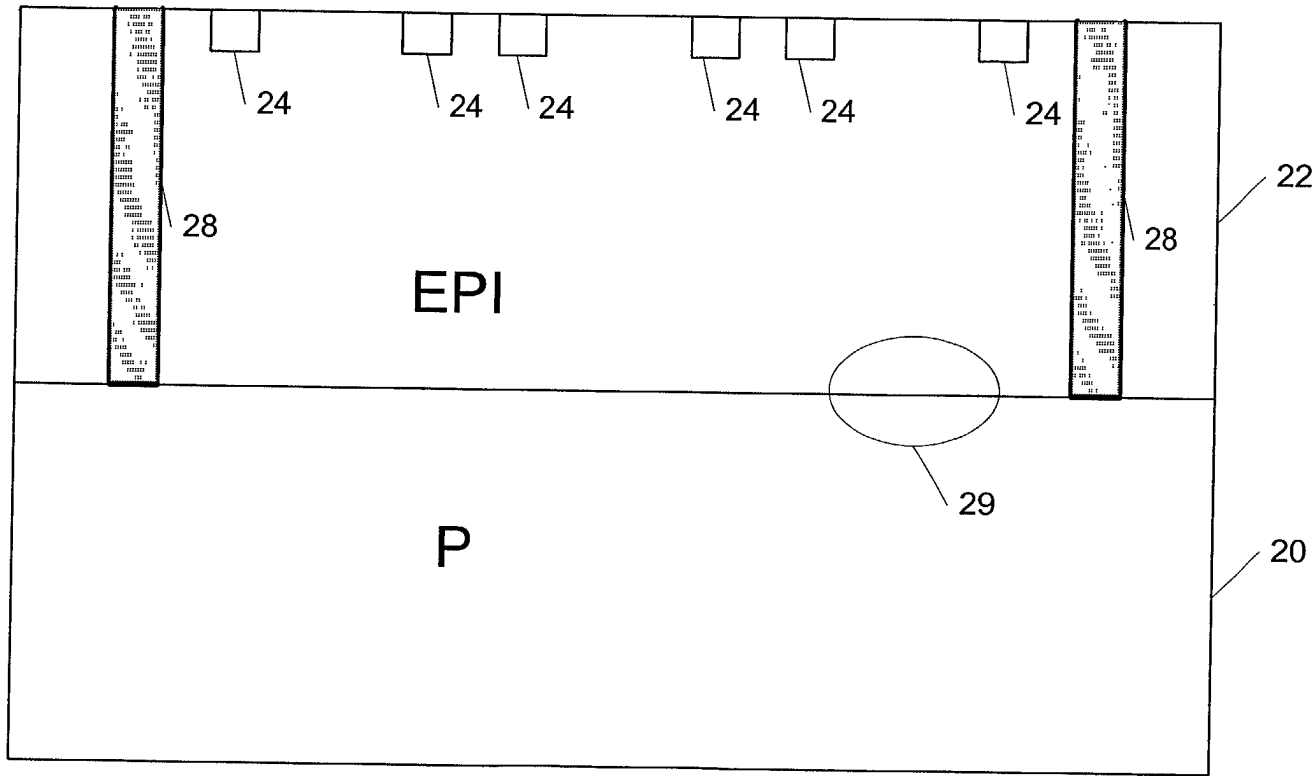


Fig. 2f

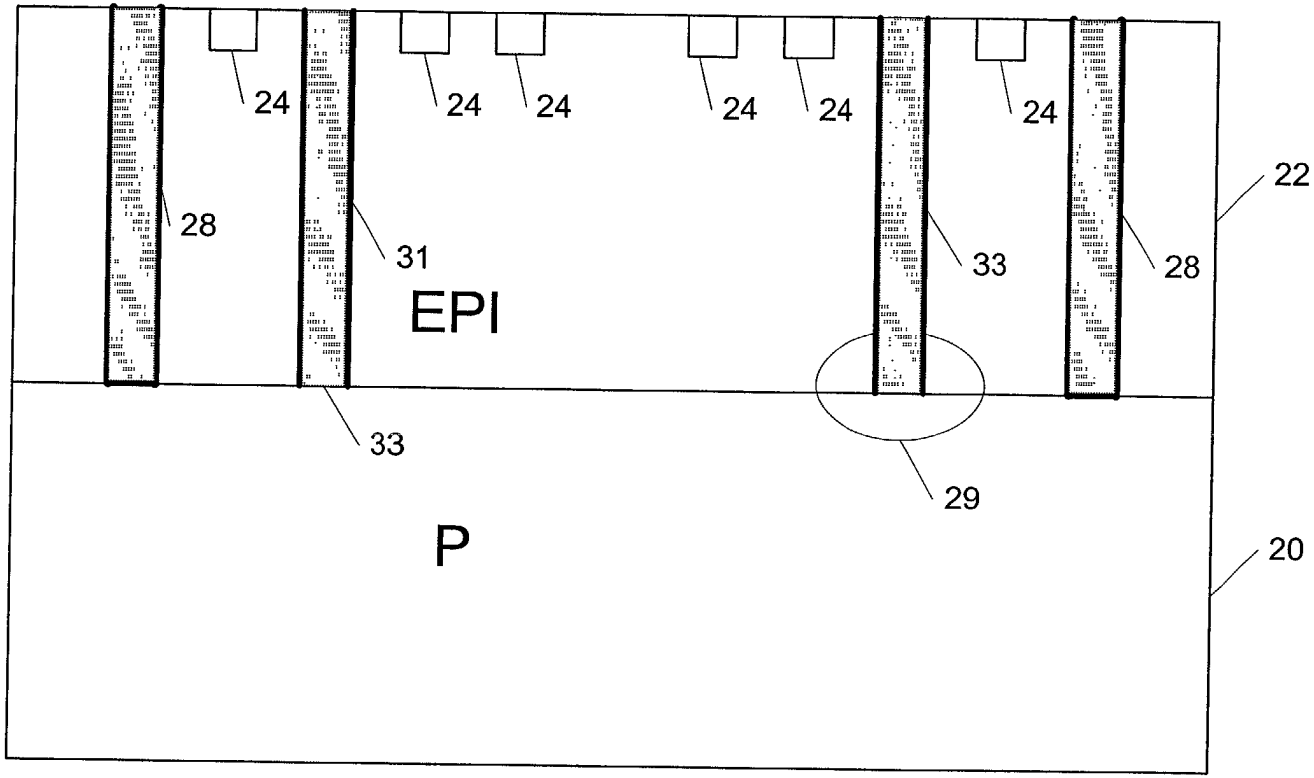


Fig. 2g

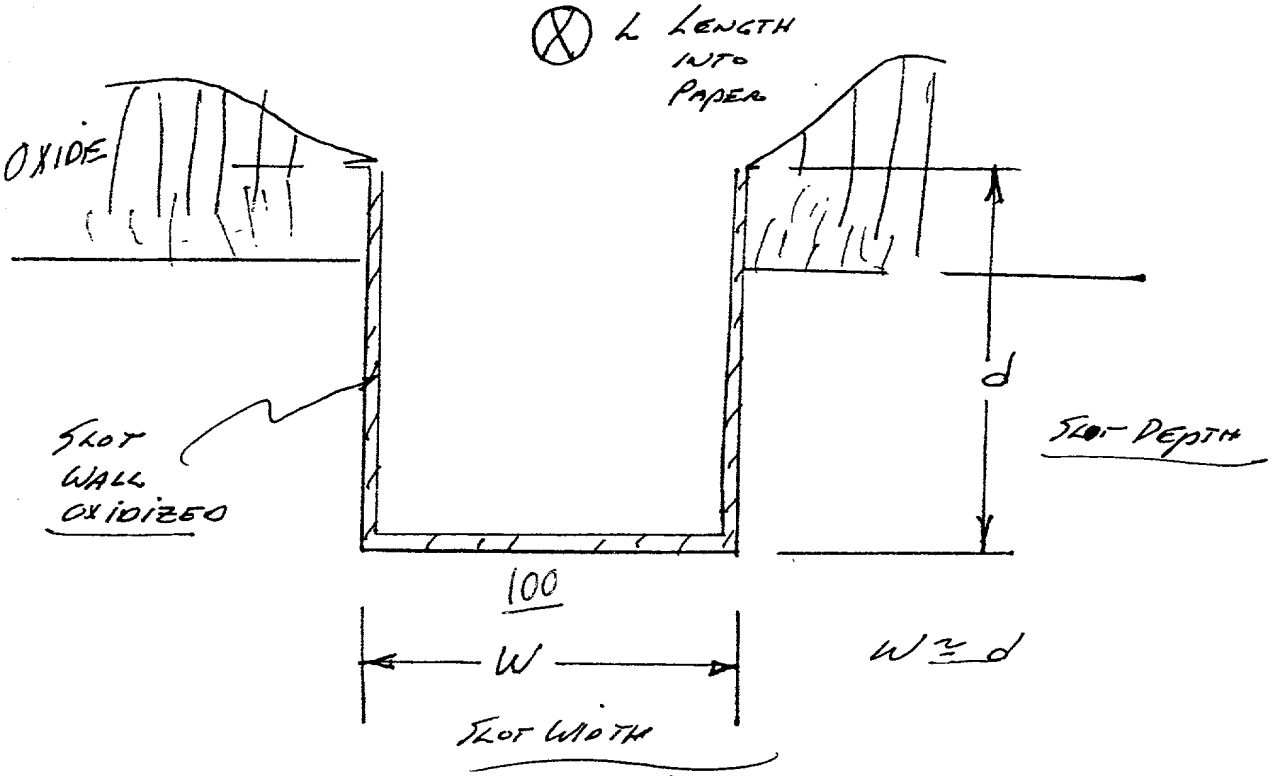

L LENGTH INTO PAPER
OXIDE
SLOT WALL OXIDIZED
d
SLOT DEPTH
100
W
SLOT WIDTH
W ≥ d

Fig. 3

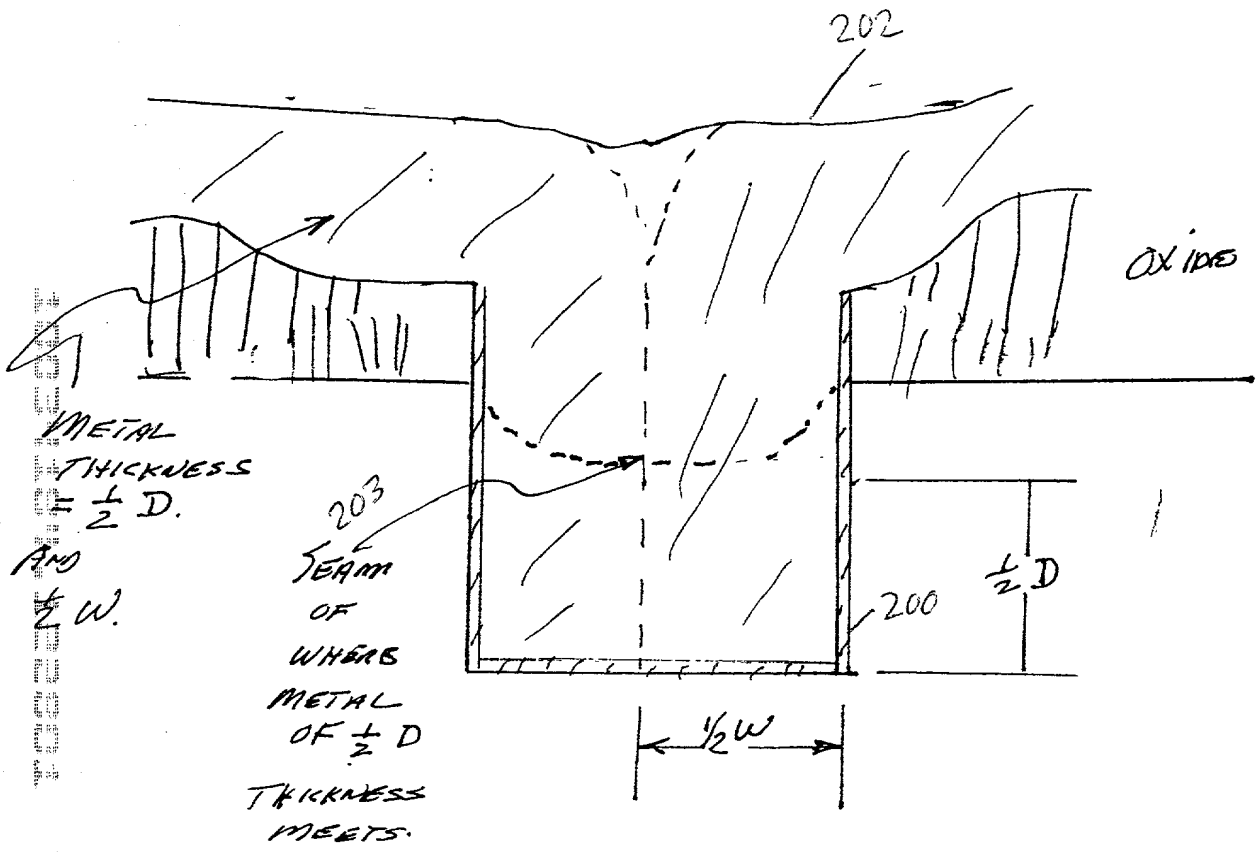
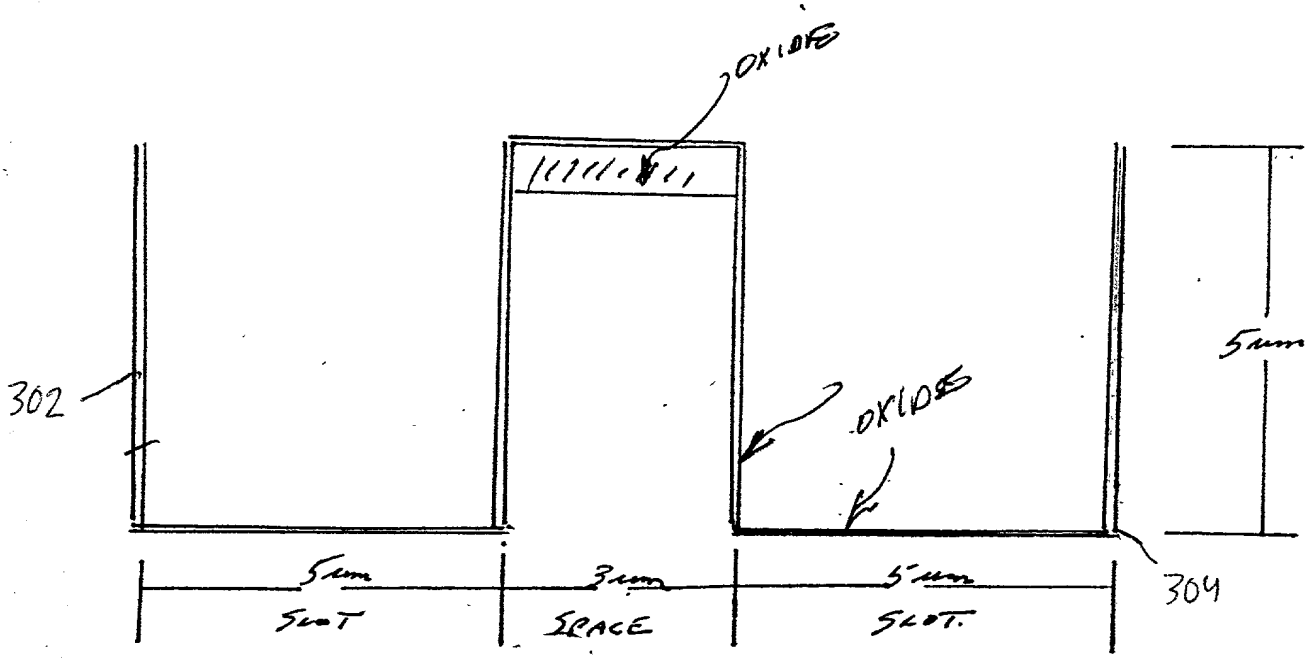
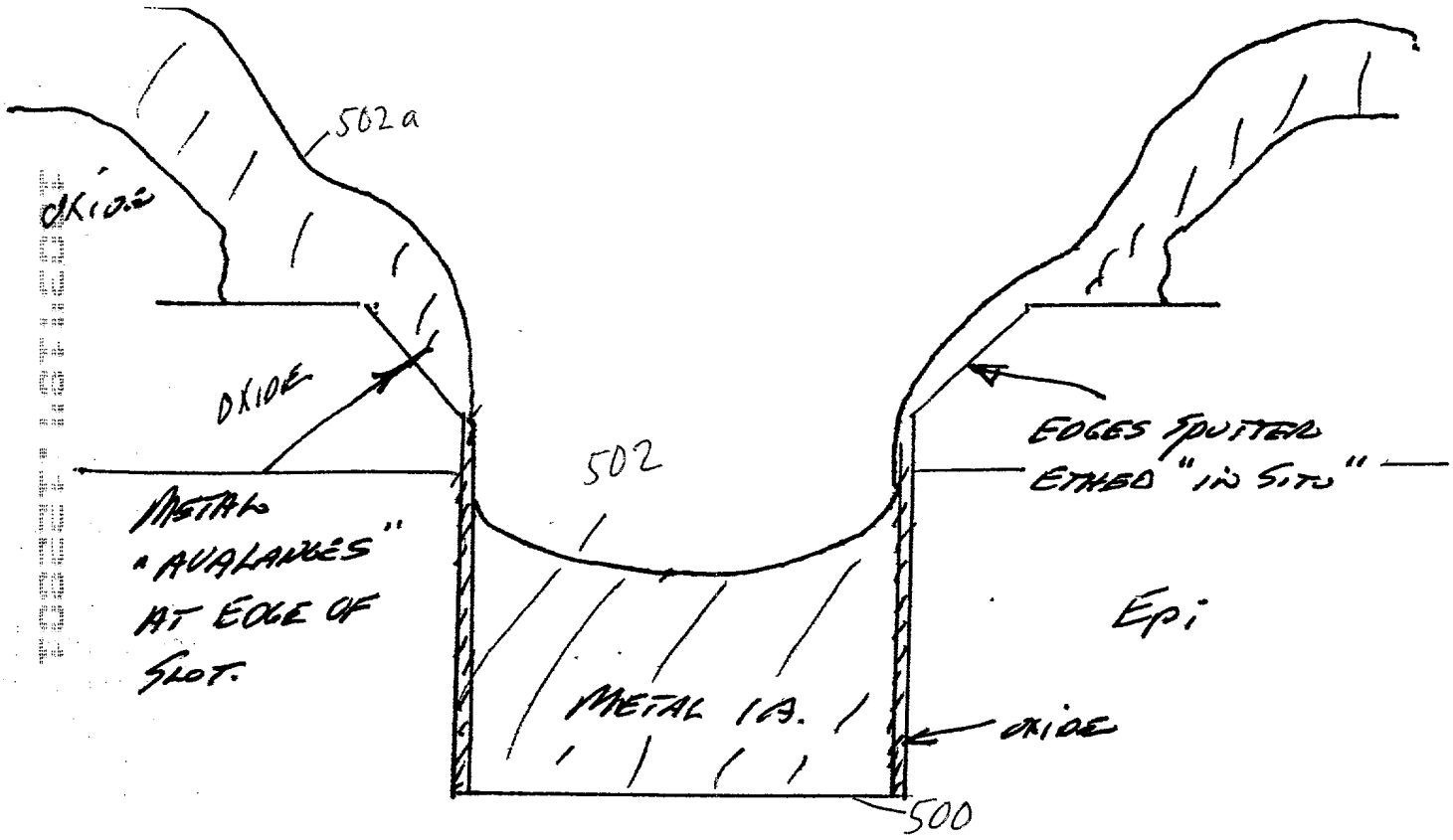

202
OXIDES
METAL THICKNESS = ½ D.
AND ½ W.
203
SEAM OF WHERE METAL OF ½ D THICKNESS MEETS.
200
½ D
½ W

Fig. 4



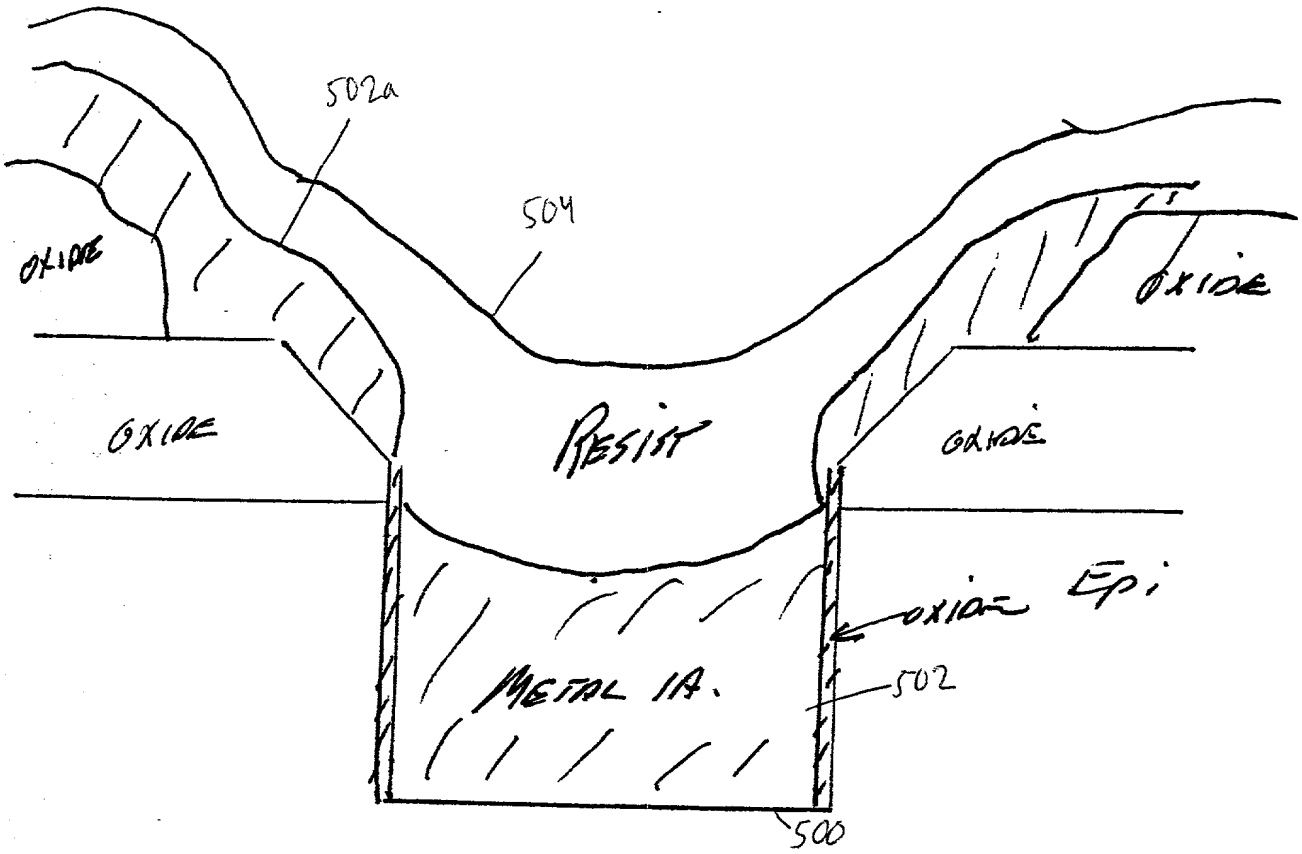
DOUBLE SLOT FOR
DOUBLE WIDTH OF METAL.
3um SPACE BETWEEN SLOTS

Fig. 4a



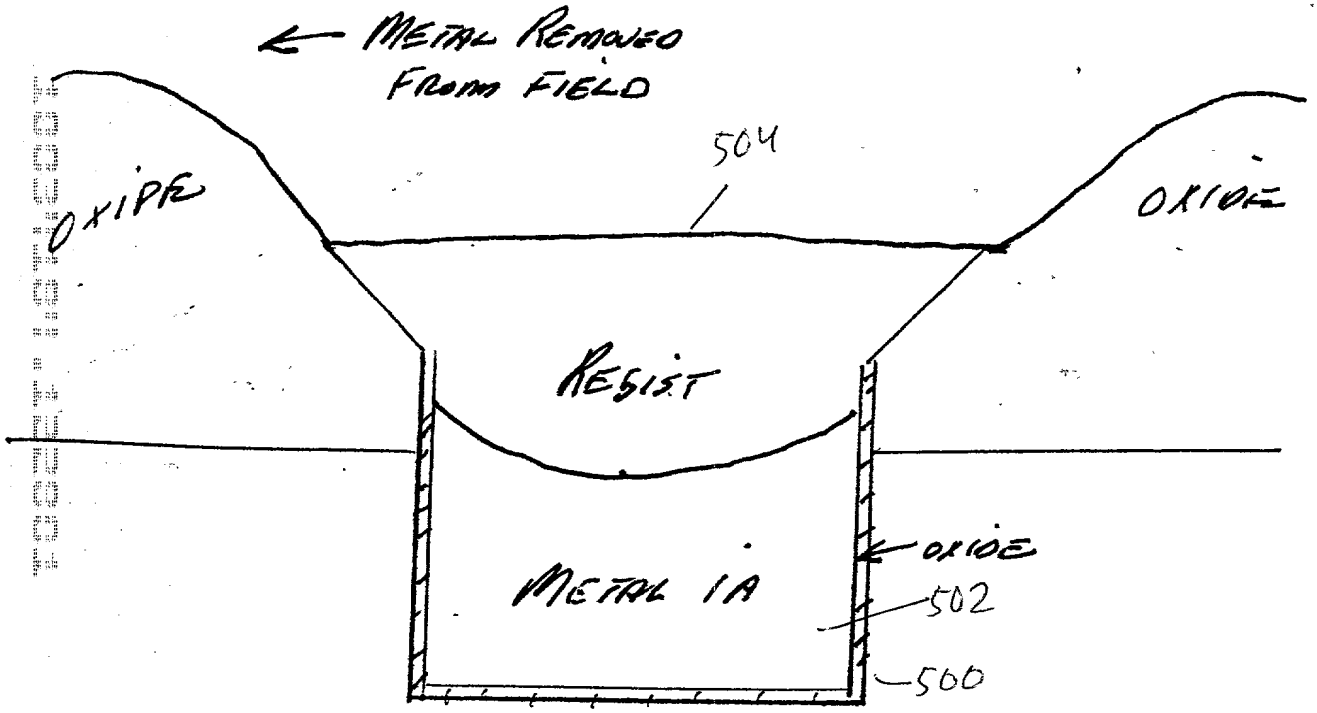
PRIOR TO METAL 1A BEING SPUTTERED, THE EDGES OF THE OXIDES ARE SPUTTERED ETCHED "IN SITU" BEFORE 1A DEPOSITED

Fig. 5



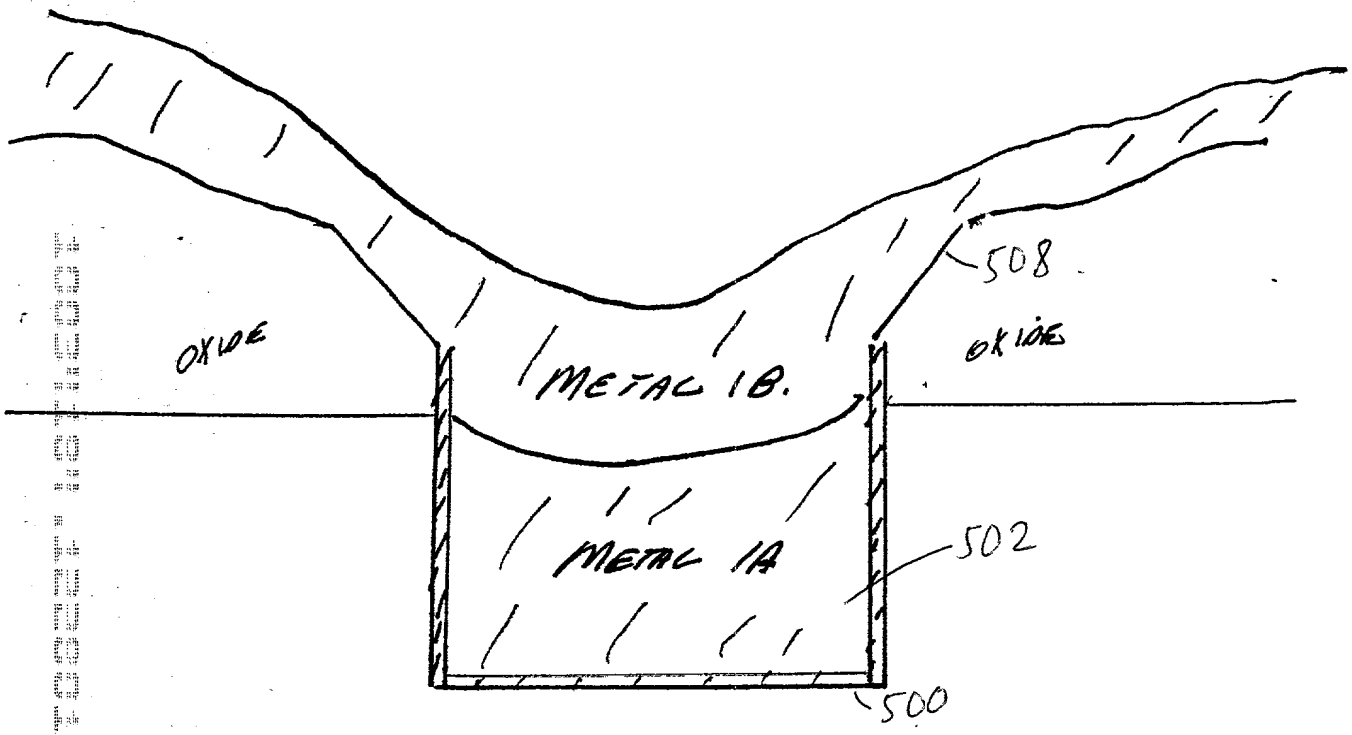
RESIST COATING - THICK IN THE SLOTS

Fig. 6



RESIST PLANAR ETCHED.
LEAVING RESIST IN SLOTS
FIELD METAL ETCHED OFF.

Fig. 7



RESIST STRIPPED & SECOND METAL 1B SPUTTER DEPOSITED

Fig. 8

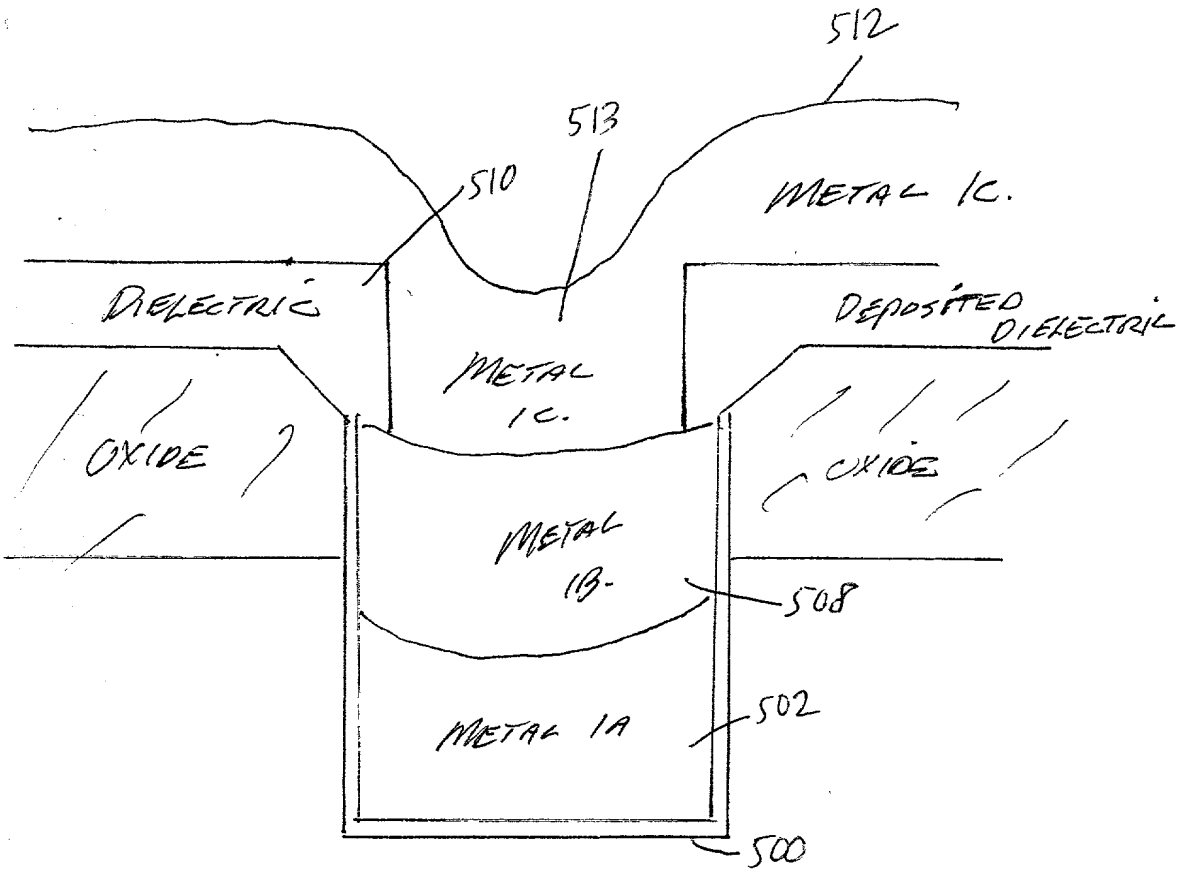

512
513
510
METAL IC.
DIELECTRIC
DEPOSITED DIELECTRIC
METAL IC.
OXIDE
OXIDE
METAL 1B
508
METAL 1A
502
500

Fig. 9

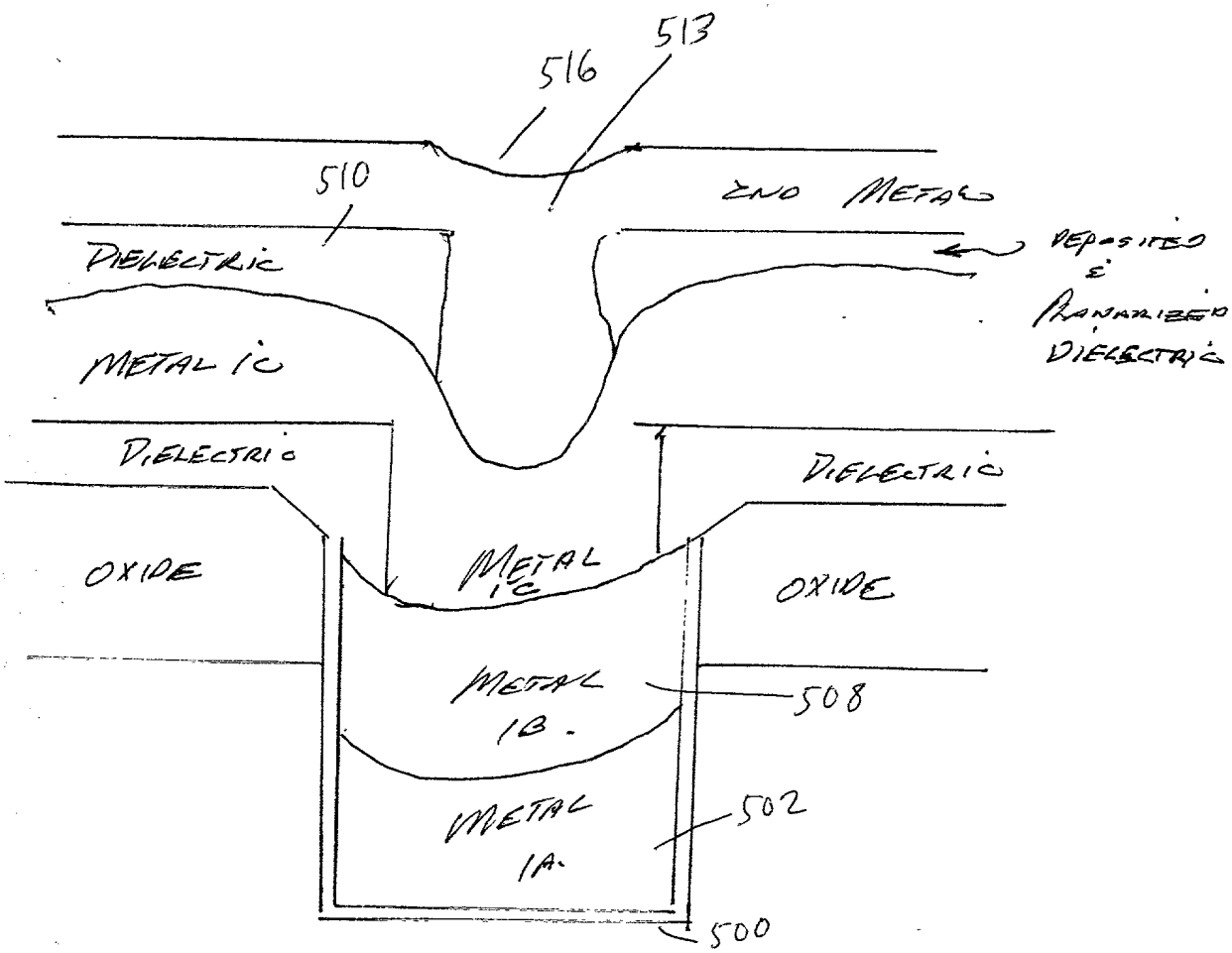
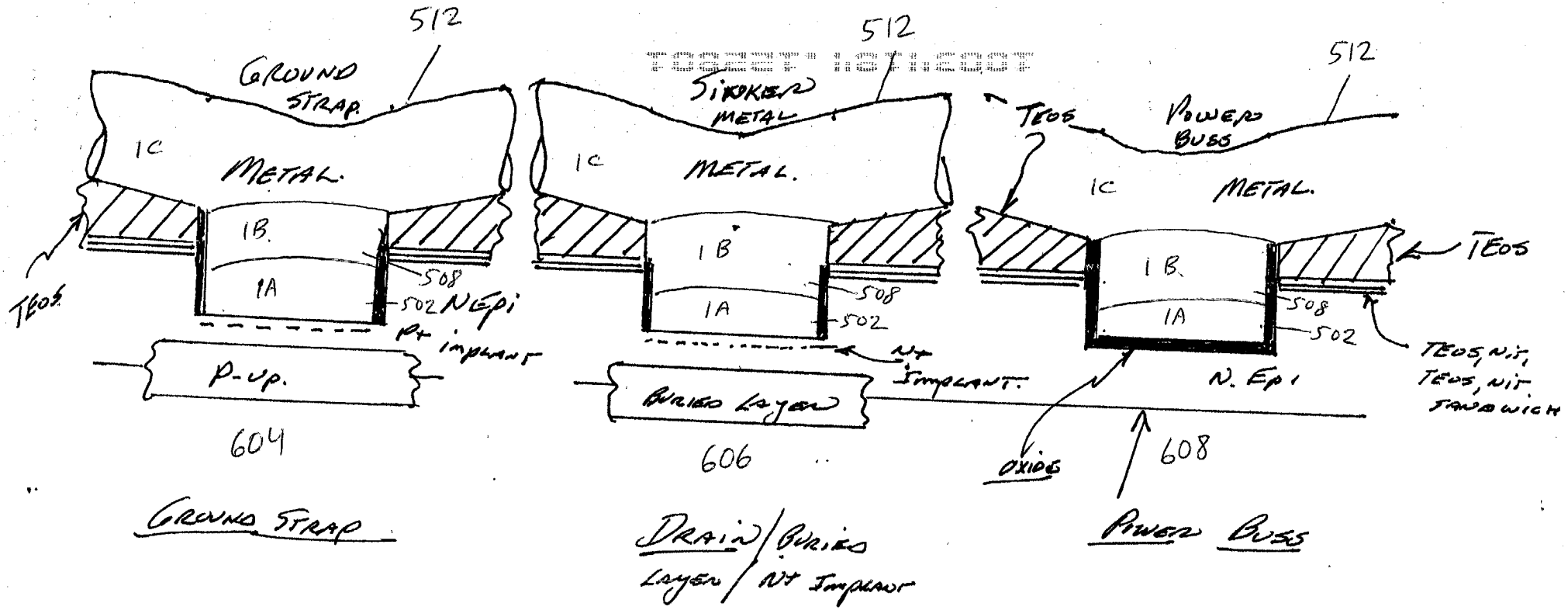

513
516
510
2ND METAL
DEPOSITED & PLANARIZED DIELECTRIC
DIELECTRIC
METAL 1C
DIELECTRIC
DIELECTRIC
OXIDE
METAL 1C
OXIDE
METAL 1B.
508
METAL 1A.
502
500

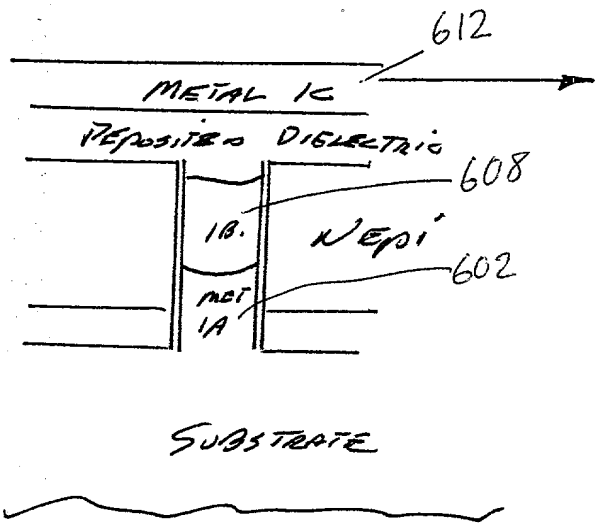
Fig. 10



GROUND STRAP / POWER BUSS / DRAIN METAL SINKER

SHOWN AFTER LAYERS OF DIELECTRIC FOLLOWED BY 9000Å TEOS – POLISH.–
SLOT MASK – METAL.
METAL 1.5 – 2.0 μm deposited

Fig. 11 POWER METAL.



METAL IC CONNECTS AN ISOLATED ISLAND TO ADJACENT ISOLATED Epi ISLANDS AND CROSSES OVER THE ISOLATION GROUND STRAP BY NOT OPENING A VIA IN THIS PORTION TO ALLOW IC TO BE ISOLATED FROM GROUND.

Fig. 12